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UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
WD2-98-057

Total Pages in this Submission

TO THE ASSISTANT COMMISSIONER FOR PATENTS

**Box Patent Application
Washington, D.C. 20231**

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

INTERNET SURVEILLANCE SYSTEM AND METHOD

and invented by:

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If a CONTINUATION APPLICATION, check appropriate box and supply the requisite information:

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Enclosed are:

Application Elements

1. ☐ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 62 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☐ Cross References to Related Applications (if applicable)
 - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. ☐ Reference to Microfiche Appendix (if applicable)
 - e. ☒ Background of the Invention
 - f. ☒ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings (if drawings filed)
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☒ Formal b. ☐ Informal Number of Sheets 10
4. ☒ Oath or Declaration
- a. ☐ Newly executed *(original or copy)* ☒ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☐ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ Computer Program in Microfiche
7. ☐ Genetic Sequence Submission *(if applicable, all must be included)*
- a. ☐ Paper Copy
- b. ☐ Computer Readable Copy
- c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

8. ☐ Assignment Papers *(cover sheet & documents)*
9. ☐ 37 CFR 3.73(b) Statement *(when there is an assignee)*
10. ☐ English Translation Document *(if applicable)*
11. ☐ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Acknowledgment postcard
14. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail *(Specify Label No.):* EM566048890US

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Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. ☐ Small Entity Statement(s) - Specify Number of Statements Submitted: _____

17. ☐ Additional Enclosures (please identify below):

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	179	- 20 =	159	x \$9.00	\$1,431.00
Indep. Claims	19	- 3 =	16	x \$39.00	\$624.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$380.00
OTHER FEE (specify purpose) _____					\$0.00
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INTERNET SURVEILLANCE SYSTEM AND METHOD

TECHNICAL FIELD

This invention relates generally to a commerce-based system and method, and in particular, to a system and method for a central server to manage remote monitoring tasks
5 performed by users of a data network such as the Internet.

BACKGROUND

Video surveillance has grown to play an important part in security. Video cameras have been employed in numerous locations to monitor and deter certain undesirable
10 behavior.

Video cameras are currently used to monitor locations in the absence of humans. ATMs, banks, and convenience stores are typically equipped with video cameras that constantly record video signals for later viewing. Thus, in the event of an emergency such as a robbery, the recorded signal can be reviewed at a later time to help identify the
15 perpetrators of the crime. However, these systems are primarily useful for identifying criminals after the crime has been committed. The only way these systems can prevent crime is by the deterrence that results from the presence of the camera. That is, an unscrupulous party would be more hesitant to commit a crime if they saw a video camera.

Video cameras have also been employed to assist humans in monitoring
20 locations. Retail stores have used video cameras so that store managers and security guards can view customer behavior in an effort to curtail shop-lifting. Furthermore, security guards in offices and apartment buildings use video cameras to view several locations simultaneously. For example, a security guard may view hallways, parking lots and elevators while sitting at a front desk.

While video cameras that automatically record activity for later review are not particularly useful in preventing crime, video cameras that assist humans in the monitoring process suffer their own shortcomings. For example, proprietary systems such as closed-circuit television systems can only be used by employed security guards. And because only a
5 limited number of security guards can feasibly view the video feeds from these closed-circuit television systems, there are more errors in the detection of emergencies. In order to effectively monitor all areas of an establishment at all times, the owner would need to employ a substantial number of security guards, which would be prohibitively costly. Moreover, prior art video security systems do not enable managers and employers to test for a security
10 guard's attentiveness. Thus, a security guard could be sleeping while supposedly "watching" the monitor.

The widespread adoption of the Internet as a tool for remote communication has also given rise to the development of video and image-based remote security systems. For example, PriVID Eye Systems Corporation is a Florida-based development firm
15 specializing in advanced remote video monitoring technologies. Their "RemoteVision MX" is a software "video capture card" package that enables a user to view remote locations through their PC over a telephone line. Similarly, Novex Canada's "Video Catcher Plus" ("VC+") is a home security package that includes software, 4 alarms, 4 video cameras and a small device that plugs into the serial port of a home PC. The video cameras and the alarms
20 are connected to the computer through the device. A user of the VC+ can connect to their PC from a remote computer through a conventional modem/PSTN connection to view video feeds. The VC+ allows for viewing of up to 4 videos on one screen simultaneously. Also,

the VC+ is enabled with motion detection such that recording can be automatically started only if and when a motion is detected.

Companies such as Cannondale have recently employed a web-based system enabling managers to view production work as described by James E. Gaskin, "Cyberspace Goes Blue-collar", *Inter@ctive Week*, August 19, 1998. As discussed in the Gaskin article, Weyer Haeuser not only uses web-based remote cameras to view the production floor, but has supplemented remote monitoring using net-cams to view dials and meters of production equipment. However, these web-based systems suffer from the same shortcomings as closed-circuit television systems. In particular, there currently is no way for a property owner to effectively monitor his premises without prohibitively escalating his costs or to test the attentiveness of those monitoring his premises.

SUMMARY OF INVENTION

The problems identified above are solved and a technical advance is achieved in the art by providing, in accordance with the present invention, a system and method for a central server to manage remote monitoring tasks.

A method for a central server to manage remote monitoring tasks according to one embodiment of the present invention includes: receiving a request from a user of a user device to monitor a remote location; determining a remote location to be monitored; enabling communication between a sensor at the remote location and the user device; and crediting value to the user for monitoring the remote location in accordance with an amount of time the user device has been in communication with the sensor for remote monitoring purposes.

A method according to an alternate embodiment of the present invention includes: receiving a request from a user of a user device to monitor a remote location in

exchange for value; determining a remote location to be monitored; enabling communication between a sensor at the remote location and the user device; and measuring user attentiveness while the user device is in communication with the sensor. Many other advantageous embodiments are also disclosed.

5 Thus, one embodiment of the present invention is directed to a commerce-based system and method that enables members of the general public who have access to a data network such as the Internet to log on at any time and perform remote monitoring tasks for value. In accordance with one aspect of the present invention, a user account is credited with value in accordance with the amount of time a user spends monitoring remote locations.
10 Moreover, little or no skill is required of the user short of his remaining attentive during a remote monitoring session. Thus, the idle time of unskilled workers, as well as the underutilized idle time of even highly skilled workers, can now be turned into value in accordance with the present invention.

 An alternate embodiment measures user attentiveness. In one such
15 embodiment, an inattentive user is penalized by automatically replacing him with another user and preventing him from participating in remote monitoring tasks in the future. Thus, location owners can rest assured that their properties are being diligently monitored while they are away without having to incur excessive costs associated with hiring security guards (e.g., providing them with uniforms, benefits, etc.).

20 Another aspect of the present invention includes taking precautions to maintain anonymity of the locations being monitored. Anonymity is advantageous because the present invention allows individuals who are not guaranteed to be trustworthy to monitor private property over a public network (e.g., rather than requiring any pre-screening of users,

one embodiment of the present invention simply relies upon user attentiveness to determine whether a user will be permitted to continue to participate in remote monitoring tasks). Without taking precautions to maintain anonymity, an unscrupulous individual knowing the location's identity could study its characteristics to plan a crime. Thus, in one embodiment
5 of the present invention, users are not provided with the identity of the remote location being monitored and, indeed, affirmative measures are taken to prevent the user from ascertaining the identity of the location.

Further aspects of the present invention will become apparent during the course of the following description and by reference to the attached drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram illustrating one embodiment of the system of the present invention.

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FIG. 2 is a block diagram illustrating one embodiment of the central server of the present invention.

FIG. 3 is a block diagram illustrating an exemplary user device.

FIG. 4 illustrates an exemplary user database.

FIG. 5 illustrates an exemplary task database.

FIG. 6 illustrates an exemplary session status database.

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FIG. 7 illustrates an exemplary database of user performance testing rules.

FIGS. 8A and 8B are flow-charts illustrating an exemplary process of the monitoring session program executed by the central server of the present invention.

FIG. 9 is a flow chart illustrating an exemplary emergency procedure executed by the central server of the present invention.

DETAILED DESCRIPTION

5 Referring now to the drawings, wherein like reference numerals refer to like parts, FIG. 1 illustrates one embodiment of the present invention wherein users of a data network such as the Internet can "log on" to a web site and monitor one or more remote locations in exchange for value.

As shown in FIG. 1, a central server 200 is coupled to a plurality of remote
10 location sensor devices 100a-c and a plurality of user devices 300a-c. Central server 200 may be a high bandwidth web server of the type commonly operated by Internet service providers. User devices 300a-c may be personal computers and/or televisions coupled to the Internet (e.g., WebTV). Location sensor devices 100a-c may comprise digital/analog video
15 sensors, laser and/or light sensors, radar, sonar and other sensing devices well known to those skilled in the art. It is to be understood that any number of user devices and sensor devices may be coupled to the central server 200.

In one embodiment of the present invention, the central server 200 may be operated and maintained by an Internet service provider (ISP), such as America Online™.
20 The ISP receives payment from entities (e.g., banks, retail stores, private home owners, etc.) desiring their locations to be monitored by one or more of the ISP's users. For example, Fleet Bank may offer to pay the ISP \$6.00 per hour to have a user monitor a Fleet branch remotely over the Internet. The ISP in turn advertises this opportunity to its users at the stated rate (i.e., \$6.00 per hour) less a service fee (e.g., 25% of the quoted rate of \$6.00 per

hour). After a user has logged on and completed the remote monitoring task, the ISP bills Fleet Bank at the stated rate and pays or credits the user for their time at the stated rate less the service fee.

To monitor remote locations for value, users initially register with the central server 200 and receive a user identifier. After registering, users can simply present their user identifier to central server 200 when logging on for assignment of a remote monitoring task. Remote monitoring tasks include a task identifier and a shift (e.g., a date and/or a time period). Central server 200 assigns the remote monitoring task taking into account predetermined rules specified by the location owner, such as a predetermined number of users required to monitor the remote location simultaneously and/or a minimum user rating. In accordance with one aspect of the present invention, users are rated based on their attentiveness during monitoring sessions, as will be discussed in detail hereinafter in connection with FIG. 8.

In addition, a number of precautions are preferably taken by central server 200 to maintain anonymity of the location being monitored. Anonymity is typically advantageous since the present invention allows individuals who are not guaranteed to be trustworthy to monitor private property over a public network. These precautions are discussed in detail hereinafter in connection with FIG. 8 and include preventing the user from monitoring a location that is within a predetermined distance of the user's home address. At a minimum, the identity of the physical location assigned for monitoring is not revealed to the user. In the prior art remote video surveillance systems discussed above, anonymity was not important, or even practical, because those systems were designed for private usage.

At the start of the shift, central server 200, enables communication between the location sensor devices 100a-c and the user devices 300a-c. As previously indicated, a location may be monitored by a plurality of users simultaneously. During the shift, central server 200 takes steps to measure, encourage and/or enforce user attentiveness, as will be discussed in detail hereinafter in connection with FIG. 8. One method of measuring user attentiveness includes transmitting test communications to the user device and receiving responses to the test communications within a predetermined period of time. If a predetermined number of responses to test communications are not received within the time specified, the user's rating is lowered and communication between the location sensor device(s) and the user device may consequently be disabled. In addition to lowering the user's rating, the user can be further penalized as discussed in detail hereinafter in connection with FIG. 8, including preventing future monitoring by the user. However, if communication between the user device and the remote sensor device(s) has not been disabled due to inattentiveness, at the end of the shift, central server 200 credits value to the user's account for performing the monitoring task as will be discussed in detail hereinafter.

At the time a user is assigned the remote monitoring task, he is also provided with emergency procedures to be followed in the event that the user detects an emergency at the remote location during his shift. If a signal is received by the user device from the central server 200 and the user interprets that signal to indicate an emergency at the remote location, central server 200 will determine whether the reported emergency is legitimate in the manner discussed in detail hereinafter in connection with FIG. 8. If legitimate, central server 200 will transmit an output request to an emergency dispatch service corresponding to the sensor location. Alternatively, the emergency procedure provided to the user includes the phone

number of the emergency dispatch service (i.e., a service geographically corresponding to the remote location) and thus, upon detection of an emergency, the user can contact the emergency dispatch service himself.

FIG. 2 depicts a block diagram of an exemplary central server 200 maintained and operated, e.g., by an Internet service provider. The central server 200 performs all the operations of a conventional server maintained and operated by an Internet service provider and performs additional operations in accordance with the present invention. The central server 200 includes a CPU 205 coupled to a ROM 210, RAM 215 and system clock 207. The CPU 205 is also coupled to the location sensor devices 100a-c and the user devices 300a-c via a communications port 220. As shown in FIG. 2, the CPU 205 is also coupled to a data storage device 225. Of course, CPU 205 may comprise a plurality of processors working in conjunction.

Data storage device 225 includes a variety of databases including a user database 230, a task database 240, a session status database 245, and a user performance testing rules database 250. The user database 230 of data storage device 225 contains user information. The task database 240 contains information concerning remote monitoring tasks. The session status database 245 contains information concerning the status of remote monitoring tasks. The user performance testing rules database 250 contains testing rules for remote monitoring tasks. Each of these databases will be discussed in detail hereinafter in conjunction with FIGS. 4-7. Storage device 225 further includes a monitoring session program 260 executed by CPU 205 to manage remote monitoring tasks in accordance with the present invention. The monitoring session program 260 will be discussed in detail hereinafter in connection with FIGS. 8 and 9.

FIG. 3 is a block diagram illustrating an exemplary user device 300. In one embodiment, the user device can be a personal computer, which includes a CPU 305 coupled to ROM 310, RAM 315 and system clock 320. The CPU 305 is coupled to a variety of input devices 325 and output devices 330. The input devices 325 may include one or more of the following: a mouse, a keyboard, a monitor with “touch screen” capability, and a microphone. The output devices 330 may include, for example, a monitor and/or a speaker. The device 300 also includes a communications port 335 for accessing a data network 340 such as the Internet.

FIG. 4 illustrates an exemplary user database 230, which records information concerning users who have registered to log on to the central server of the present invention to monitor remote locations in exchange for value. As previously indicated, when a user first requests to monitor a remote location, a record for the user is established in the user database 230. For each record, the user database 230 includes a user identifier field 410, a user rating field 420, and an account balance field 430.

The user identifier field 410 of user database 230 contains a user identifier such as a password, a PIN number, a credit card number, or a telephone number provided by the user, or some other identifier assigned to the user by the central server 200. The user rating field 420 contains a user rating generated by central server 200 based on the user’s past performance during remote monitoring sessions. Lastly, account balance field 430 is a running account (e.g., a financial account) of the value credited to the user in exchange for performing remote monitoring tasks.

FIG. 5 illustrates an exemplary task database 240 which preferably stores specific information for each remote monitoring task. When a location owner instructs the

operator of server 200 (e.g., an ISP) to have its location monitored remotely by one of the ISP's users, a record for the remote monitoring task is established in the task database 240 in accordance with information provided to the ISP by the location owner. For each record, the task database includes a task identifier in field 505 (assigned by the ISP), the geographic location of the remote sensor in field 510 (e.g., Fleet Bank, Hamden, CT Branch), the electronic address of the remote sensor in field 515 (e.g., www.fleetbank.com/branch3/cam1), and the owner of the location in field 520 (e.g. Fleet Corporation, Hartford, CT). Each record also includes the pay rate associated with monitoring the location in field 525, any rules that must be satisfied prior to monitoring the location in field 530 (e.g., more than 3 users), the shift(s) during which the location is to be remotely monitored in field 535 and the emergency procedures to be followed in the event that the user detects an emergency condition at the remote location in field 540 (e.g., click the emergency button on the ISP frame). Lastly, each record also contains an indication in field 545 of the availability of the remote monitoring task (i.e., whether or not user(s) are still needed to perform the task).

FIG. 6 illustrates an exemplary session status database 245, which maintains status information for each shift of a remote monitoring task. For each task and shift identified by the task identifier in field 605 and shift in field 610, the session status database 245 includes the user identifier(s) in field 615 (as indicated above, more than one user may monitor the same location), the status of the shift in field 620, and the performance results of the user(s) in responding to test communications in field 625. As shown in FIG. 6, if the shift of the remote monitoring task has not yet commenced, the entries in fields 620 ("Status") and 625 ("Performance Results") will contain the indication "Not Available" ("N/A").

FIG. 7 illustrates an exemplary user performance testing rules database 250.

The user performance testing rules database 250 includes a plurality of records each associated with the user testing rules for a particular task. Each record includes fields for a task identifier in field 705, a test communication in field 710, test communication intervals in field 715, the required response time in field 720, and the required response in field 725.

The test communication field 710 in database 250 contains the test communication to be transmitted to the user during the remote monitoring task (e.g., staged emergencies, questions, etc.). Field 715 contains the frequency at which the test communication is to be transmitted to the user (e.g., random, periodic, etc.). Field 720 contains the time in which the user is required to respond to the test communication (e.g., 10 seconds). Lastly, field 725 contains the required user response to the test communication (e.g., click 911 button).

FIGS. 8A and 8B are flow-charts illustrating an exemplary process of the monitoring session program 260 executed by central server 200. Users preferably “register” with the operator of the central server 200 to perform remote monitoring tasks. Registration may take place on-line, by phone, by mail, or in-person. At the time of registration, central server 200 assigns the user a user identifier (if one is not supplied by the user) and then creates a record for the user in user database 230 (if one has not already been created). As shown in FIG. 4, the record will contain the user identifier in field 410. However, the user rating in field 420 will contain a “Not Available” entry or the like and the account balance in field 430 will be “\$0.00” if the user has not yet performed a remote monitoring task. If registration occurs on-line, the user may either remain on-line for assignment of a remote monitoring task, or log off and then log back on at a later time to request an assignment.

Turning to FIG. 8A, in step 800, central server 200 receives a request from a user of the data network to monitor a remote location. The request may include the user identifier previously assigned to the user. In step 805, the central server 200 accesses task database 240 and identifies a remote monitoring task for assignment to the user. This includes determining an appropriate task identifier (e.g., "12345") and shift (e.g., 1/1/98 and/or 12:00AM – 3:00 AM). In an alternate embodiment, the user is not assigned a shift. Rather, the user can log on for assignment of a remote monitoring task at any time and end the remote monitoring session (i.e., log off) at any time. As a precondition to logging off without negatively impacting the user's rating, sever 200 may require that an alternate user be available to continue monitoring the remote location. (As discussed in detail below, the present invention can notify a back-up user to replace an original user.)

The process of identifying a remote monitoring task may take into account the predetermined rules in field 530 of task database 240 specified by the location owner (e.g., a minimum user rating required for a user to be assigned a particular location). The process may also take into account user-specified preferences concerning the assigned shift. In addition, the process preferably includes taking precautions to maintain anonymity of the location being monitored. Without such precautions, an unscrupulous user knowing the location's identity could study the location's characteristics, such as its traffic patterns, to plan a crime. For example, central server 200 may prevent the user from monitoring a location that is within a predetermined distance from the user's physical location (as determined by reference to zip codes or modern navigation methods such as GPS). Alternatively, central server 200 may prevent the user from monitoring the location more than a predetermined total number of times, or from monitoring the location during a

predetermined time of day if the user has previously monitored the location a predetermined number of times during that time of day. In yet another embodiment, central server 200 may randomly change the user's assigned location during the user's shift. In summary, it is desirable that central server 200 not provide the user with the identity of the remote location to be monitored and take affirmative steps to prevent the user from ascertaining the identity of the location.

Once a task identifier and shift has been assigned to the user, central server 200 communicates them to the user together with the emergency procedure specified in field 540 of task database 240 for reporting emergencies at the remote location. In step 810, the central server 200 establishes a record for the user in session status database 245. Rather than creating a new record for the user, the user identifier may be added to a previously established record. For example, a location may be monitored by a plurality of users and at least one user of the plurality of users may have already been assigned the location and thus a corresponding record may have already been established in session status database 245. The record in session status database 245 includes the task identifier in field 605, the shift in field 610 and the user identifier in field 615. The status in field 620 and the performance results in field 625 may contain a "Not Available" entry or the like, until commencement of the remote monitoring session.

It is to be understood that often it may be impractical for the user to remain in communication with central server 200 until the start time of the shift (e.g., the user may be logged on in the early morning and the assigned shift does not begin until mid-afternoon). In such instances, the user may log off after receiving the task identifier and shift, and then log on to central server 200 at a time closer to the start of the shift. When logging back on, the

user preferably provides the user identifier, task identifier and shift to assist central server 200 in identifying which remote monitoring task in session status database 245 the user is logging on to perform (e.g., the user may be assigned more than one remote monitoring task). Central server 200 may also transmit a reminder to the user via e-mail or telephonically (i.e., a voice call) prior to the start of the shift.

At a predetermined period of time prior to the start of the shift, central server 200 in step 815 determines whether the rules in field 530 of task database 240 corresponding to the task identifier and shift assigned to the user have been satisfied. For example, the rules may require a minimum number of users (and/or users of a particular rating) for the remote monitoring task to commence. Moreover, the number of assigned users and/or the user ratings of those users may have changed since the user was initially assigned the task identifier and shift requiring a re-evaluation in light of the rules in field 530 of database 240. If the rules in field 530 have been satisfied then in step 820 central server 200 uses the sensor address in field 515 of task database 240 to enable communication between the location sensor device(s) and the user device at the start of the shift. Central server 200 also updates the status in field 620 of the appropriate record in session status database 245 from "Not Available" to "In Progress". It is to be understood that the communication between the location sensor devices and the user devices can be video-based and/or audio-based. If only audio-based, a "speakerphone" setting on the user device is used to monitor sounds at the remote location.

As previously described, a location may be monitored in accordance with the present invention by a plurality of users simultaneously. In such instances, the present invention can deter "bystander inaction syndrome". Bystander inaction syndrome is a

sociological behavioral pattern that emerges when several people simultaneously witness an emergency, but each person assumes that someone else will notify the authorities. The present invention prevents this behavioral pattern in several ways. In one embodiment, central server 200 simply does not inform the user that anyone else is monitoring the location.

5 In another embodiment, central server 200 informs the user that he is the *only* user monitoring the remote location. In either case, the user is instilled with the belief that if he does not report the emergency, it will not be reported at all. In an alternate embodiment, central server 200 informs the user whenever an emergency is reported by another user at the location the user is monitoring. In this manner, when an emergency occurs, the user knows
10 whether anyone else has reported it yet and can act accordingly. In some of the embodiments discussed hereinafter, central server 200 imposes penalties for false positives or inattentiveness and/or pays bonuses for the detection of legitimate emergencies. Thus, in those embodiments, users are economically motivated to report legitimate emergencies.

Continuing with FIG. 8A, central server 200 in step 825 uses the task
15 identifier to access the corresponding record in the user performance testing rules database 250. At the test communication intervals specified in field 715, central server 200 transmits the test communication specified in field 710 of the record to the user device to measure user attentiveness. In a first embodiment, the test communication comprises a randomly transmitted predetermined video of a fabricated emergency. In a second embodiment, the test
20 communication comprises one or more questions communicated to the user, for example, by e-mail.

In an alternate embodiment, central server 200 monitors a biometric reading from the user at the remote device to measure user attentiveness. For example, the user

device may be equipped with a retinal scanner similar to those being developed for ATM machines. The retinal scanner would then take random, periodic or continuous readings to determine whether the user is watching the video stream from the remote location on his screen. In yet another alternate embodiment, the user device is equipped with a video
5 camera. Other users can then log on to central server 200 and be assigned the remote monitoring task of monitoring another user monitoring a remote location. Once inattention is detected, central server 200 may also *enforce* attention by causing an audible alarm to be transmitted to the user. The alarm may grow progressively louder until the user responds to the alarm.

10 Whereas the foregoing embodiments function to detect and deter inattention, other embodiments function to *encourage* attentiveness. In one embodiment, for example, central server 200 randomly transmits to the user an offer to enter the user in a sweepstakes. In another embodiment, entertainment video is transmitted to the user at random times and/or for random durations. Since the user cannot predict when the next transmission of
15 entertainment video will occur, he will be encouraged to remain attentive to await the next transmission.

In step 830 of FIG. 8A, central server 200 determines whether a response to the test communication was received within the response time specified in field 720. If a predetermined number of responses (which may be recorded in RAM 215 for the duration of
20 the shift) are not received within the time specified in field 720, then in step 835 central server 200 penalizes the user by adjusting the user's rating in user database 230 in accordance with predetermined criteria, and thereafter disables communications between the location sensor device(s) and the user device. In addition to adjusting the user's rating, central server

200 may penalize the user by not paying him for the remote monitoring session, paying him less than the pay rate specified in field 525 of task database 240, imposing a charge upon the user (i.e., deducting a predetermined amount from the account balance in field 430 of user database 230), and, in an extreme case, preventing the user from participating in remote monitoring tasks in the future. In one embodiment, if central server 200 determines that the user is inattentive, a back-up user can be notified to replace the original user. The back-up user can then log-on and monitor the location for the remainder of the original user's shift. Such an embodiment is particularly well suited to situations in which the operator of central server 200 is an ISP, since the ISP can actively monitor all current users that utilize the ISP for Internet related services. Thus, the ISP can recruit users to perform remote monitoring tasks for value (e.g., by transmitting offers to registered users of the ISP).

If a response was received within the specified time, central server 200, in step 840 of FIG. 8B, evaluates the response to determine whether it was the response specified in field 725 of the user performance testing rules database 250 (e.g., click 911). If the test communication transmitted to the user comprises a question, the evaluation in step 840 includes determining whether the user responded with the expected answer. In step 845, central server 200 updates the user's rating in database 230 in accordance with predetermined criteria and, if the user's shift is not over (step 850), the process returns to step 825. As discussed above, the ratings can be used when determining whether to assign a user a particular remote monitoring task and it is envisioned that users with higher ratings will be assigned higher paying tasks (e.g., a bank may be willing to pay more than a homeowner to have a location remotely monitored). At the end of the shift, in step 850, the central server 200 uses the task identifier to access the corresponding record in the session status database

245 and update the entry in field 625 ("Performance Results") to reflect the user's performance in responding to test communications. Alternatively, the user's performance may be continuously or periodically updated during the shift.

Finally, in step 855, central server 200 credits the user's account balance in
5 field 430 of user database 230 in accordance with the pay rate and shift duration specified in fields 525 and 535 respectively of task database 240. Various payment schemes are contemplated. For example, the pay rate may incorporate such criteria as the time of day (e.g., a user may be paid more to monitor a location between the early morning hours of 2:00AM and 5:00AM), whether the user is monitoring two or more locations simultaneously
10 (e.g., a user may be paid more to monitor two or more locations at the same time), the criminal history of the community in which the sensor is located (e.g., a user may be paid more to monitor locations whose zip codes correspond to communities having statistically higher crime rates or, alternatively, more users may be assigned to higher crime areas), and/or the number of users simultaneously monitoring the remote location (e.g., the user may be
15 paid less if more than one user is monitoring the same location). If the operator of central server 200 is an ISP, the user may be provided with discounted or free Internet access if the user monitors the location for a predetermined amount of time during the billing cycle. The ISP may also submit sweepstakes entries or other positive rewards on the user's behalf for each predetermined period of time spent monitoring a location (e.g., one entry for each x
20 minutes spent monitoring). Those skilled in the art will appreciate that many types of services may be granted to the user in exchange for performing remote monitoring tasks. In addition, bonuses may be paid for each legitimate emergency detected by the user.

In an alternate embodiment, the user operates a different program (e.g., a word processor) in a different window on the user device 300a-c while maintaining communication with the sensor device(s) 100a-c via central server 200 using a web browser. In this embodiment, the sensor device includes a video camera and a motion detector. Rather than, or in addition to, detecting motion at the remote location, the sensor device may be equipped to detect other events such as a predetermined level of light intensity (e.g., a bright light illuminating a dark area) or static (e.g., resulting from the sensor having been disabled). In response to a signal from the central server indicative of a predetermined event having been detected by a sensor device, the user device preempts the program being operated by the user to immediately display the video data received from the video camera. The user can then review the displayed video data to determine whether an emergency has occurred at the remote location. Thus, in accordance with one aspect of the present invention, a user can receive value for passively monitoring a remote location while working on an entirely different project.

In yet an alternate embodiment, rather than enabling communication between sensor devices 100a-c and user devices 300a-c via the Internet, central server 200 causes the video/audio data stream received from sensor devices 100a-c to be transmitted to user devices 300a-c via a dedicated television channel of a wireless or cable television system. The user can then monitor the video/audio data on the user device, which, in this embodiment, is preferably a television set. In addition, if the user device includes a picture-in-picture feature, the user can employ this feature to monitor the video data while watching a program on another television station. In these embodiments, a user can submit a request to monitor a remote location via an interactive television set or, via his telephone by calling the operator of

central server 200, if his television does not include an interactive feature. In an alternate embodiment, in addition to a video camera, the sensor device(s) 100a-c include detectors for detecting predetermined events (e.g., a predetermined level of motion, sound, light intensity, etc.) at the remote location. When a predetermined event is detected by the sensor device, a

5 signal indicative of the predetermined event is transmitted from the central server to functionality in the television set via the wireless or cable television system. In response to the received signal, the functionality in the television set preempts the television program currently being watched by the user to display the video/audio data received from the video camera (e.g., the television will change channels to the dedicated television channel).

10 Alternatively, the functionality in the television set may simply display a visual alert to the user to manually change channels to the dedicated television channel. [WE NEED SOME CLAIMS DIRECTED TO THIS MANUAL EMBODIMENT] In these embodiments, functionality in the television set may also cause an audible alarm to be issued to inform the user that a predetermined event has been detected at the remote sensor. Thus, the user may

15 engage in other activities, such as household chores, while monitoring a remote location in exchange for value.

FIG. 9 is a flow chart illustrating an exemplary emergency procedure executed by the central server 200 of the present invention. In step 900, central server 200 receives a signal from the user device indicating an emergency at the remote location corresponding to

20 the sensor address of the current monitoring session. In step 905, central server 200 determines whether the reported emergency is in response to a test communication and, if not, whether the reported emergency is legitimate. In one embodiment, if the reported emergency is not in response to a test communication, central server 200 will immediately

communicate the video feed of the remote location to other users who will verify that an emergency has occurred. In a second embodiment, central server 200 will contact an emergency dispatch service only if a threshold number or percentage of users have reported the emergency. If the emergency is not legitimate, central server 200, in step 910, lowers the user's rating in user database 230 in accordance with predetermined criteria. If, however, the reported emergency is legitimate, central server 200, in step 915, transmits an output request to an emergency dispatch service corresponding to the sensor location in field 510 of task database 240. Alternatively, central server 200 communicates to the user the phone number of the emergency dispatch service corresponding to the geographic location of the sensor.

Upon detecting an emergency, the user contacts the emergency dispatch service himself.

The many features and advantages of the present invention are apparent from the detailed specification, and thus, it is intended by the appended claims to cover all such features and advantages of the invention which fall within the true spirit and scope of the present invention.

Furthermore, since numerous modifications and variations will readily occur to those skilled in the art, it is not desired that the present invention be limited to the exact construction and operation illustrated and described herein, and accordingly, all suitable modifications and equivalents which may be resorted to are intended to fall within the scope of the claims.

CLAIMS

We claim:

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1. A method for a central server to manage remote monitoring tasks, comprising:
receiving a request from a user of a user device to monitor a remote location;
determining a remote location to be monitored;
enabling communication between a sensor at the remote location and the user
device; and
crediting value to the user in accordance with an amount of time the user
device has been in communication with the sensor for remote monitoring purposes.

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2. The method of claim 1 wherein the user device is at least one of a personal
computer and a television set.

1

3. The method of claim 1 wherein the request includes an account identifier.

1

4. The method of claim 1 wherein the request includes a task identifier.

1 5. The method of claim 1 further comprising the step of:
2 determining a shift for monitoring the remote location; and wherein the step of
3 enabling communication between the sensor and the user device occurs at approximately a
4 start of the shift.

1 6. The method of claim 5 wherein the shift includes a date and a time.

1 7. The method of claim 1 wherein an identity of the remote location is not
2 communicated to the user.

1 8. The method of claim 1 further comprising the step of registering the user to
2 monitor remote locations.

1 9. The method of claim 1 wherein communication between the sensor and the
2 user device involves the Internet.

1 10. The method of claim 1 wherein communication between the sensor and the
2 user device includes at least one of video communication and audio communication.

1 11. The method of claim 1 wherein the step of crediting value includes crediting a
2 financial account.

1 12. The method of claim 1 further comprising the step of:
2 determining whether predetermined criteria have been satisfied prior to
3 enabling communication between the sensor and the user device.

1 13. The method of claim 12 wherein the predetermined criteria includes a
2 minimum number of users to monitor the remote location.

1 14. The method of claim 12 wherein the predetermined criteria includes a user
2 rating.

1 15. The method of claim 5 further comprising the steps of:
2 disabling communication between the sensor at the remote location and the
3 user; and
4 enabling communication between a sensor at a second remote location and the
5 user,
6 wherein the steps of disabling and enabling occur during the shift.

1 16. The method of claim 1 further comprising the steps of:
2 transmitting a test communication to the user at the user device; and
3 determining whether a response to the test communication is received within a
4 predetermined period of time.

1 17. The method of claim 16 further comprising the step of:
2 updating a user rating based on the response.

1 18. The method of claim 1 further comprising the steps of:
2 outputting an offer to the user at the user device to enter the user in a
3 sweepstakes; and
4 receiving a response to the offer.

1 19. The method of claim 18 further comprising the step of:
2 entering the user in the sweepstakes.

1 20. The method of claim 1 further comprising the steps of:
2 transmitting entertainment video to the user at the user device.

1 21. The method of claim 20 wherein entertainment video is transmitted to the user
2 at random times.

1 22. The method of claim 20 wherein entertainment video is transmitted to the user
2 for random durations.

1 23. The method of claim 1 further comprising the steps of:
2 receiving from the user device notification of an emergency at the remote
3 location; and
4 contacting a third party in response to the received notification.

1 24. The method of claim 23 wherein the third party is contacted by telephone.

1 25. The method of claim 1 further comprising the steps of:
2 determining a pay rate; and
3 crediting value to the user in accordance with the pay rate.

1 26. The method of claim 1, further comprising the step of:
2 receiving from the user device notification of an emergency at the remote
3 location, and wherein the step of crediting value to the user includes paying a bonus for each
4 legitimate emergency detected by the user.

1 27. A method for a central server to manage remote monitoring tasks, comprising:
2 assigning to a user of a data network a remote monitoring task including a
3 remote location to monitor and a shift for monitoring the remote location; and
4 providing the user with information relating to the remote monitoring task, the
5 information to be transmitted by the user to the central server at approximately a start of the
6 shift.

1 28. The method of claim 27 wherein the information comprises at least one of an
2 account identifier, a task identifier and the shift.

1 29. The method of claim 27 wherein the data network is the Internet.

1 30. The method of claim 27 wherein the data network is a cable television
2 network.

1 31. The method of claim 27 further comprising the step of:
2 determining whether predetermined criteria have been satisfied prior to
3 providing the user with the information to be transmitted to the central server.

1 32. The method of claim 31 wherein the predetermined criteria includes a user
2 rating.

1 33. The method of claim 27 further comprising the step of:
2 preventing the user from monitoring a remote location that is within a
3 predetermined distance from the user's address.

1 34. The method of claim 27 further comprising the step of:
2 preventing the user from monitoring a remote location more than a
3 predetermined number of times.

1 35. The method of claim 27 further comprising the step of:
2 preventing the user from monitoring a remote location during a predetermined
3 period of time.

1 36. The method of claim 27 wherein the step of assigning a remote monitoring
2 task is based on user-specified preferences concerning the shift.

1 37. The method of claim 27 further comprising the steps of:
2 determining an emergency procedure to be followed by the user in the event
3 the user detects an emergency at the remote location; and
4 transmitting the emergency procedure to the user.

1 38. The method of claim 37 wherein the emergency procedure includes a
2 procedure for contacting a third party.

1 39. The method of claim 38 wherein the third party is contacted by telephone.

1 40. The method of claim 27 further comprising the step of:
2 reminding the user of the remote monitoring task prior to a start of the shift.

1 41. A method for a central server to manage remote monitoring tasks, comprising:
2 determining a remote location to be monitored;

3 enabling communication between a sensor at the remote location and a
4 plurality of users of a data network;
5 determining an amount of time each user of the plurality of users has
6 monitored the remote location; and
7 crediting value to each user of the plurality of users for monitoring the remote
8 location in accordance with the amount of time that each user has monitored the remote
9 location.

1 42. The method of claim 41 further comprising the steps of:

2 determining a shift for monitoring the remote location; and wherein the step of
3 enabling communication between the sensor and the plurality of users occurs at
4 approximately a start of the shift.

1 43. The method of claim 41 further comprising the step of:

2 recruiting users to monitor the remote location.

1 44. The method of claim 41 further comprising the step of:

2 informing a user of the plurality of users that he is the only user monitoring
3 the remote location.

1 45. The method of claim 41 further comprising the steps of:
2 receiving notification of an emergency at the remote location from a first user
3 of the plurality of users; and
4 contacting a third party if at least a predetermined amount of the plurality of
5 users reports the emergency.

1 46. The method of claim 45 further comprising the step of:
2 informing a second user of the plurality of users of the notification of the
3 emergency at the remote location.

1 47. A method for a central server to manage remote monitoring tasks, comprising:
2 receiving a request from a user of a user device to monitor a remote location in
3 exchange for value;
4 determining a remote location to be monitored;
5 enabling communication between a sensor at the remote location and the user
6 device; and
7 measuring user attentiveness while the user device is in communication with
8 the sensor.

1 48. The method of claim 47 wherein the user device is a personal computer.

1 49. The method of claim 47 further comprising the step of:
2 determining a shift for monitoring the remote location; and wherein the step of
3 enabling communication between the sensor and the user device occurs at approximately a
4 start of the shift.

1 50. The method of claim 47 further comprising the step of:
2 determining whether predetermined criteria have been satisfied prior to
3 enabling communication between the sensor and the user device.

1 51. The method of claim 50, wherein the predetermined criteria includes a
2 minimum user rating required to monitor the remote location.

1 52. The method of claim 51, wherein the minimum user rating is based on
2 measured user attentiveness.

1 53. The method of claim 47 further comprising the step of crediting value to a
2 financial account of the user for monitoring the remote location.

1 54. The method of claim 47 wherein the step of measuring user attentiveness
2 includes:
3 transmitting a test communication to the user at the user device; and
4 determining whether a response to the test communication has been received
5 within a predetermined period of time.

1 55. The method of claim 54 wherein the test communication is a predetermined
2 video of an emergency.

1 56. The method of claim 54 wherein the test communication is a query.

1 57. The method of claim 54 further comprising the step of:
2 determining whether the response is an expected response.

1 58. The method of claim 47 wherein the step of measuring user attentiveness
2 includes:
3 receiving a biometric measurement of the user.

1 59. The method of claim 58 wherein the biometric measurement is a retinal scan.

1 60. The method of claim 47 wherein the step of measuring user attentiveness
2 includes the step of:
3 enabling a second user to monitor the user monitoring the remote location.

1 61. The method of claim 47 further comprising the step of causing an audible
2 alarm to be transmitted to the user at the user device if the user is not attentive.

1 62. The method of claim 47 further comprising the step of:
2 penalizing the user if the user is not attentive.

1 63. The method of claim 62 wherein the step of penalizing the user includes
2 paying the user only if the user is attentive.

1 64. The method of claim 62 wherein the step of penalizing the user includes
2 crediting an account of the user an amount that is less than if the user had been attentive.

1 65. The method of claim 62 wherein the step of penalizing the user includes
2 charging an account of the user.

1 66. The method of claim 62 wherein the step of penalizing the user includes
2 preventing future monitoring by the user.

1 67. The method of claim 47 further comprising the steps of:
2 determining whether the user is attentive; and
3 if the user is not attentive, replacing the user with an alternate user to monitor
4 the remote location.

1 68. A method for alerting a user of a computer of an emergency at a remotely
2 monitored location, comprising:
3 maintaining the computer in communication with a sensor at the remotely
4 monitored location;
5 transmitting a signal indicative of a predetermined event detected by the
6 sensor to the computer; and
7 transmitting video data from a camera at the remotely monitored location to
8 the computer,
9 wherein the signal causes the computer to preempt a program unrelated to
10 remote monitoring to display the video data.

1 69. The method of claim 68 wherein the step of maintaining the computer in
2 communication with the remote sensor is performed via a browser.

1 70. The method of claim 68 wherein the program is a word processor.

1 71. The method of claim 68 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 72. A method for alerting an individual of an emergency at a remote location,
2 comprising:

3 transmitting a signal indicative of a predetermined event detected by a sensor
4 at the remote location to a television set; and

5 transmitting video data from a camera at the remote location to the television
6 set,

7 wherein the signal causes the television set to preempt a television program to
8 display the video data.

1 73. The method of claim 72 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 74. The method of claim 73 further comprising the step of transmitting a signal to
2 the television set to sound an alarm to inform the user of the predetermined event detected at
3 the sensor.

1 75. A method for a user of a data network to monitor remote locations in exchange
2 for value:

3 receiving a data stream generated by a sensor at a remote location;
4 monitoring the data stream for an amount of time; and
5 receiving credit to a user account for monitoring the data stream for that
6 amount of time.

1 76. The method of claim 75 further comprising the step of transmitting an account
2 identifier to the central server.

1 77. The method of claim 75 further comprising the step of providing a task
2 identifier to the central server.

1 78. The method of claim 75 wherein the data network is the Internet.

1 79. The method of claim 75 wherein the data stream comprises at least one of a
2 video data stream and an audio data stream.

1 80. The method of claim 75 wherein the credit is monetary.

1 81. The method of claim 75 wherein the data stream comprises a plurality of data
2 streams.

1 82. The method of claim 81 wherein the step of monitoring comprises monitoring
2 the plurality of data streams substantially simultaneously.

1 83. The method of claim 75 wherein the step of monitoring the data stream
2 includes the step of monitoring for an emergency at the remote location.

1 84. The method of claim 83 further comprising the step of notifying the central
2 server in the event an emergency is detected.

1 85. The method of claim 75 further comprising the steps of:
2 receiving a predetermined video of an emergency; and
3 responding to the predetermined video of an emergency within a
4 predetermined period of time.

1 86. The method of claim 75 further comprising the steps of:
2 receiving queries; and
3 responding to the queries within a predetermined period of time.

1 87. A method for alerting a user of a computer of an emergency at a remotely
2 monitored location, comprising:
3 maintaining communication with a remote sensor via a central server;
4 running a program on the computer, wherein the program is unrelated to
5 remote monitoring; and
6 pre-empting the program if a predetermined event is detected by the remote
7 sensor.

1 88. The method of claim 87 wherein the step of maintaining communication with
2 a remote sensor is performed via a browser.

1 89. The method of claim 87 wherein said predetermined event includes a
2 predetermined level of motion or sound.

1 90. The method of claim 87 further comprising the step of:
2 receiving video data from a camera at the remotely monitored location, and
3 wherein the step of preempting includes displaying the video data.

1 91. A method for a television set to alert an individual of an emergency at a
2 remote location, comprising:
3 receiving a signal indicative of a predetermined event detected by a sensor at
4 the remote location; and
5 in response to the signal, preempting a television program to display video
6 data received from a camera at the remote location.

1 92. The method of claim 91 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 93. The method of claim 92 further comprising the step of sounding an alarm to
2 inform the user of the predetermined event having been detected by the remote sensor.

1 94. A system for managing remote monitoring tasks comprising:
2 a memory device;
3 a processor in communication with the memory device; and
4 the processor configured to:
5 receive a request from a user of a user device to monitor a remote location;
6 determine a remote location to be monitored;
7 enable communication between a sensor at the remote location and the user
8 device; and
9 credit value to the user in accordance with an amount of time the user device
10 has been in communication with the sensor.

1 95. The system of claim 94 wherein the user devices is a personal computer.

1 96. The system of claim 94 wherein the request includes an account identifier.

1 97. The system of claim 94 wherein the request includes a task identifier.

1 98. The system of claim 94 wherein the processor is further configured to
2 determine a shift for monitoring the remote location and wherein the processor enables
3 communication between the sensor and the user device at approximately a start of the shift.

1 99. The system of claim 94 wherein the processor is further configured to register
2 the user to monitor remote locations.

1 100. The system of claim 94 wherein communication between the sensor and the
2 user device involves the Internet.

1 101. The system of claim 94 wherein communication between the sensor and the
2 user device includes at least one of video communication and audio communication.

1 102. The system of claim 94 wherein processor is further configured to determine
2 whether predetermined criteria have been satisfied prior to enabling communication between
3 the sensor and the user device.

1 103. The system of claim 102 wherein the predetermined criteria includes a
2 minimum number of users to monitor the remote location.

1 104. The system of claim 102 wherein the predetermined criteria includes a
2 minimum user rating.

1 105. The system of claim 98 wherein the processor is further configured to disable
2 communication between the sensor at the remote location and the user; and enable
3 communication between a sensor at a second remote location and the user during the shift.

1 106. The system of claim 94 wherein the processor is further configured to transmit
2 a test communication to the user at the user device; and determine whether a response to the
3 test communication is received within a predetermined period of time.

1 107. The system of claim 106 wherein the processor is further configured to update
2 a user rating based on the response.

1 108. The system of claim 94 wherein the processor is further configured to output
2 an offer to the user at the user device to enter the user in a sweepstakes; and receive a
3 response to the offer.

1 109. The method of claim 108 further comprising the step of:
2 entering the user in the sweepstakes.

1 110. The system of claim 94 wherein the processor is further configured to transmit
2 entertainment video to the user at the user device.

1 111. The method of claim 110 wherein entertainment video is transmitted to the
2 user at random times.

1 112. The method of claim 110 wherein entertainment video is transmitted to the
2 user for random durations.

1 113. The system of claim 94 wherein the processor is further configured to receive
2 from the user device notification of an emergency at the remote location; and contact a third
3 party in response to the received notification.

1 114. The system of claim 94 wherein the processor is further configured to
2 determine a pay rate; and credit value to the user in accordance with the pay rate.

1 115. The system of claim 114 wherein value is credited to a financial account.

1 116. The system of claim 94 wherein the processor is further configured to receive
2 from the user device notification of an emergency at the remote location, and pay a bonus for
3 each legitimate emergency detected by the user.

1 117. A system for managing remote monitoring tasks comprising:
2 a memory device;
3 a processor in communication with the memory device;
4 and the processor configured to:
5 assign to a user of a data network a remote monitoring task including a remote
6 location to monitor and a shift for monitoring the remote location; and
7 provide the user with information relating to the remote monitoring task, the
8 information to be transmitted by the user to the central server at approximately a start of the
9 shift.

1 118. The system of claim 117 wherein the information comprises at least one of an
2 account identifier, a task identifier and the shift.

1 119. The system of claim 117 wherein the processor is further configured to
2 determine whether predetermined criteria have been satisfied prior to providing the user with
3 the information to be transmitted to the central server.

1 120. The system of claim 119 wherein the predetermined criteria includes a
2 minimum user rating required to monitor the remote location.

1 121. The system of claim 117 wherein the processor is further configured to
2 prevent the user from monitoring a remote location that is within a predetermined distance
3 from the user's address.

1 122. The system of claim 117 wherein the processor is further configured to
2 prevent the user from monitoring a remote location more than a predetermined number of
3 times.

1 123. The system of claim 117 wherein the processor is further configured to
2 prevent the user from monitoring a remote location during a predetermined period of time.

1 124. The system of claim 117 wherein the processor is further configured to assign
2 the remote monitoring task based on user-specified preferences concerning the shift.

1 125. The system of claim 117 wherein the processor is further configured to
2 determine an emergency procedure to be followed by the user in the event the user detects an
3 emergency at the remote location; and transmit the emergency procedure to the user.

1 126. The system of claim 117 wherein the processor is further configured to remind
2 the user of the remote monitoring task prior to a start of the shift.

1 127. A system for managing remote monitoring tasks comprising:
2 a memory device;
3 a processor in communication with the memory device;
4 and the processor configured to:
5 determine a remote location to be monitored;
6 enable communication between a sensor at the remote location and a plurality
7 of users of a data network;
8 determine an amount of time each user of the plurality of users has monitored
9 the remote location; and

10 credit value to at least one of the plurality of users for monitoring the remote
11 location.

1 128. The system of claim 127 wherein the processor is further configured to
2 determine a shift for monitoring the remote location; and wherein the processor enables
3 communication between the sensor and at least one of the plurality of users at approximately
4 a start of the shift.

1 129. The system of claim 127 wherein the processor is further configured to recruit
2 users to monitor the remote location.

1 130. The system of claim 127 wherein the processor is further configured to inform
2 a user of the plurality of users that he is the only user monitoring the remote location.

1 131. The system of claim 127 wherein the processor is further configured to receive
2 notification of an emergency at the remote location from a first user of the plurality of users;
3 and contact a third party if at least a predetermined amount of the plurality of users reports
4 the emergency.

1 132. The system of claim 131 wherein the processor is further configured to inform
2 a second user of the plurality of users of the notification of the emergency at the remote
3 location.

1 133. A system for managing remote monitoring tasks comprising:
2 a memory device;
3 a processor in communication with the memory device;
4 and the processor configured to:
5 receive a request from a user of a user device to monitor a remote location in
6 exchange for value;
7 determine a remote location to be monitored;
8 enable communication between a sensor at the remote location and the user
9 device for remote monitoring purposes; and
10 measure user attentiveness while the user device is in communication with the
11 sensor.

1 134. The system of claim 133 wherein the user device is a personal computer.

1 135. The system of claim 133 wherein the processor is further configured to
2 determine a shift for monitoring the remote location; and wherein the processor enables
3 communication between the sensor and the user device at approximately a start of the shift.

1 136. The system of claim 133 wherein the processor is further configured to
2 determine whether predetermined criteria have been satisfied prior to enabling
3 communication between the sensor and the user device.

1 137. The system of claim 136 wherein the predetermined criteria includes a
2 minimum user rating required to monitor the remote location.

1 138. The system of claim 137 wherein the minimum user rating is based on
2 measured user attentiveness.

1 139. The system of claim 133 wherein the processor is further configured to credit
2 value to a financial account of the user for monitoring the remote location.

1 140. The system of claim 133 wherein the processor is configured to measures user
2 attentiveness by transmitting a test communication to the user at the user device; and
3 determining whether a response to the test communication has been received within a
4 predetermined period of time.

1 141. The system of claim 140 wherein the test communication is a predetermined
2 video of an emergency.

1 142. The system of claim 140 wherein the test communication is a query.

1 143. The system of claim 140 wherein the processor is further configured to
2 measure user attentiveness by determining whether the response is an expected response.

1 144. The system of claim 133 wherein the processor is further configured to receive
2 a biometric measurement of the user; and measure user attentiveness based on the biometric
3 measurement.

1 145. The system of claim 144 wherein the biometric measurement is a retinal scan.

1 146. The system of claim 133 wherein the processor is configured to measure user
2 attentiveness by enabling a second user to monitor the user monitoring the remote location.

1 147. The system of claim 133 wherein the processor is further configured to cause
2 an audible alarm to be transmitted to the user at the user device if the user is not attentive.

1 148. The system of claim 133 wherein the processor is further configured to
2 penalize the user if the user is not attentive.

1 149. The system of claim 148 wherein penalizing the user includes paying the user
2 only if the user is attentive.

1 150. The system of claim 148 wherein penalizing the user includes crediting the
2 user's account an amount that is less than if the user had been attentive.

1 151. The system of claim 148 wherein penalizing the user includes charging the
2 user's account.

1 152. The system of claim 148 wherein penalizing the user includes preventing
2 future monitoring by the user.

1 153. The system of claim 133 wherein the processor is further configured to replace
2 the user with an alternate user to monitor the remote location if the user is not attentive.

1 154. A system for alerting a user of a computer of an emergency at a remotely
2 monitored location comprising:
3 a memory device;
4 a processor in communication with the memory device;
5 and the processor configured to:
6 maintain the computer in communication with a remote sensor;
7 transmit a signal indicative of a predetermined event detected by the remote
8 sensor to the computer; and
9 transmit video data from a camera at the remotely monitored location to the
10 computer,
11 wherein the signal causes the computer to preempt a program unrelated to
12 remote monitoring to display the video data.

1 155. The system of claim 154 wherein the processor maintains the computer in
2 communication with a remote sensor via a browser.

1 156. The system of claim 154 wherein the program is a word processor.

1 157. The system of claim 154 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 ~~158.~~ A system for alerting an individual of an emergency at a remote location,
2 comprising:
3 a memory device;
4 a processor in communication with the memory device;
5 and the processor configured to:
6 transmit a signal indicative of a predetermined event detected by a sensor at
7 the remote location to a television set; and
8 transmit video data from a camera at the remote location to the television set,
9 wherein the signal causes the television set to preempt a program to display
10 the video data.

1 159. The system of claim 158 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 160. The system of claim 158 wherein the processor is further configured to
2 transmit a signal to the television set which causes an alarm to issue to inform the user of the
3 predetermined event detected at the sensor.

1 161. A system for alerting a user of a computer of an emergency at a remotely
2 monitored location comprising:
3 a memory device;
4 a processor in communication with the memory device;
5 and the processor configured to:
6 maintain communication with a remote sensor via a central server;
7 run a program on the computer, wherein the program is unrelated to remote
8 monitoring; and
9 pre-empt the program if a predetermined event is detected by the remote
10 sensor.

1 162. The system of claim 161 wherein the processor maintains communication with
2 the remote sensor via a browser.

1 163. The system of claim 161 wherein the predetermined event includes a
2 predetermined level of motion or sound.

1 164. The system of claim 161 wherein the processor is further configured to receive
2 video data from a camera at the remotely monitored location, and wherein preempting the
3 program includes displaying the video data.

1 165. A system for a television set to alert an individual of an emergency at a remote
2 location, comprising:
3 a memory device;
4 a processor in communication with the memory device;
5 and the processor configured to:
6 receive a signal indicative of a predetermined event detected by a sensor at the
7 remote location; and
8 in response to the signal, preempt a program to display video data received
9 from a camera at the remote location.

1 166. The system of claim 165 wherein the predetermined event includes at least one
2 of a predetermined level of motion, sound, pressure and light intensity.

1 167. The system of claim 165 wherein the processor is further configured to cause
2 an alarm to issue to inform the user of the predetermined event detected at the remotely
3 monitored location.

1 168. A method for a central server to manage remote monitoring tasks, comprising:
2 receiving a request from a user of a user device to monitor a remote location;
3 determining a remote location to be monitored;
4 determining whether predetermined criteria have been satisfied prior to
5 enabling communication between a sensor at the remote location and the user device;
6 enabling communication between the sensor and the user device;
7 measuring user attentiveness while the user device is in communication with
8 the sensor for remote monitoring purposes; and
9 crediting value to the user in accordance with an amount of time the user
10 device has been in communication with the sensor for remote monitoring purposes.

1 169. The method of claim 168 wherein the user device is a personal computer.

1 170. The method of claim 168 wherein the user device is a television set.

1 171. The method of claim 168 wherein the request is received via at least one of the
2 Internet, a wireless television network, and a cable television network.

1 172. The method of claim 169 further comprising the steps of:
2 transmitting a signal indicative of a predetermined event detected by the
3 sensor to the computer; and
4 transmitting video data from the sensor to the computer,
5 wherein the signal causes the computer to preempt a program unrelated to
6 remote monitoring to display the video data.

1 173. The method of claim 170 further comprising the steps of:
2 transmitting a signal indicative of a predetermined event detected by the
3 sensor to the television set; and
4 transmitting video data from the sensor to the television set,
5 wherein the signal causes the television set to preempt a television program to
6 display the video data.

1 174. A method for a central server to manage remote monitoring tasks, comprising:
2 a memory device;
3 a processor in communication with the memory device;
4 and the processor configured to:

5 receive a request from a user of a user device to monitor a remote location;
6 determine a remote location to be monitored;
7 determine whether predetermined criteria have been satisfied prior to enabling
8 communication between a sensor at the remote location and the user device;
9 enable communication between the sensor and the user device;
10 measure user attentiveness while the user device is in communication with the
11 sensor for remote monitoring purposes; and
12 credit value to the user in accordance with an amount of time the user device
13 has been in communication with the sensor for remote monitoring purposes.

1 175. The system of claim 174 wherein the user device is a personal computer.

1 176. The system of claim 174 wherein the user device is a television set.

1 177. The system of claim 174 wherein the request is received via at least one of the
2 Internet, a wireless television network, and a cable television network.

1 178. The system of claim 175 wherein the processor is further configured to:
2 transmit a signal indicative of a predetermined event detected by the sensor to
3 the computer; and

4 transmit video data from the sensor to the computer,
5 wherein the signal causes the computer to preempt a program unrelated to
6 remote monitoring to display the video data.

1 179. The system of claim 176 wherein the processor is further configured to:
2 transmit a signal indicative of a predetermined event detected by the sensor to
3 the television set; and
4 transmit video data from the sensor to the television set,
5 wherein the signal causes the television set to preempt a television program to
6 display the video data.

ABSTRACT

A system and method are disclosed for a central server to manage remote monitoring tasks performed by users of a data network. An exemplary method comprises: receiving a request from a user of a user device to monitor a remote location; determining a remote location to be monitored; enabling communication between a sensor at the remote location and the user device; and crediting value to the user in accordance with an amount of time the user device has been in communication with the remote sensor for remote monitoring purposes. An alternate exemplary method includes measuring user attentiveness while the user device is in communication with the remote sensor. Thus, the disclosed system and method provide a way for users of a data network such as the Internet to log on at any time and perform remote monitoring tasks for value. Idle time can now be turned into value using the disclosed system and method. Moreover, little or no skill is required of the user to earn value using the disclosed system and method; the user need only be attentive while performing a remote monitoring task. Location owners also benefit from the convenience by which they can now have their properties monitored and by the ability of the disclosed system and method to ensure the attentiveness of the user performing the remote monitoring task.

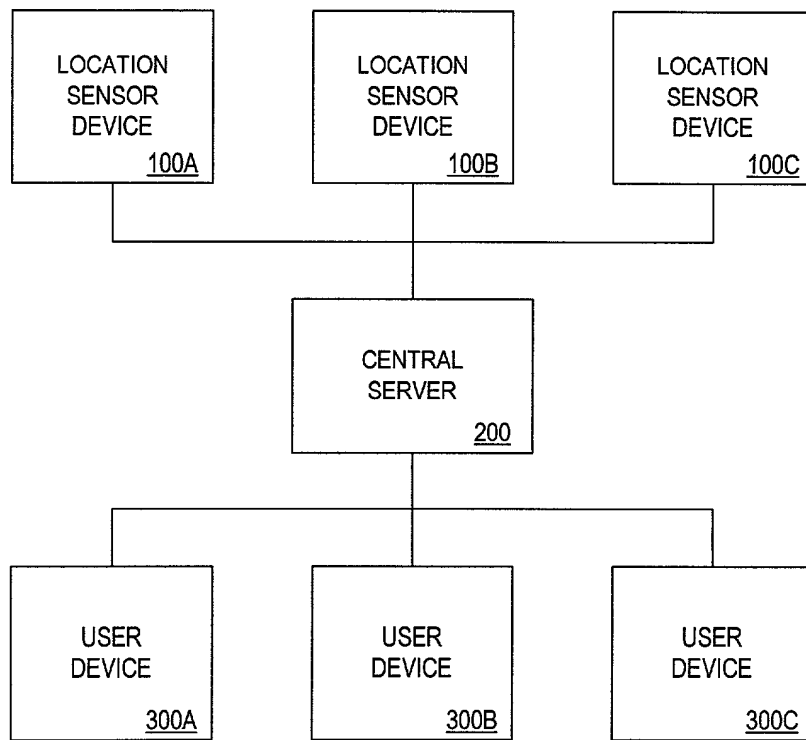


FIG. 1

FIG. 2 is a block diagram of a system 200. The system 200 includes a communications port 220, a CPU 205, a RAM 215, a ROM 210, a clock 207, and a database 225. The database 225 includes a user database 230, a task database 240, a session status database 245, user performance testing rules 250, and a monitoring session program 260. The system 200 is connected to location sensor devices 100A, 100B, and 100C, and user devices 300A, 300B, and 300C.

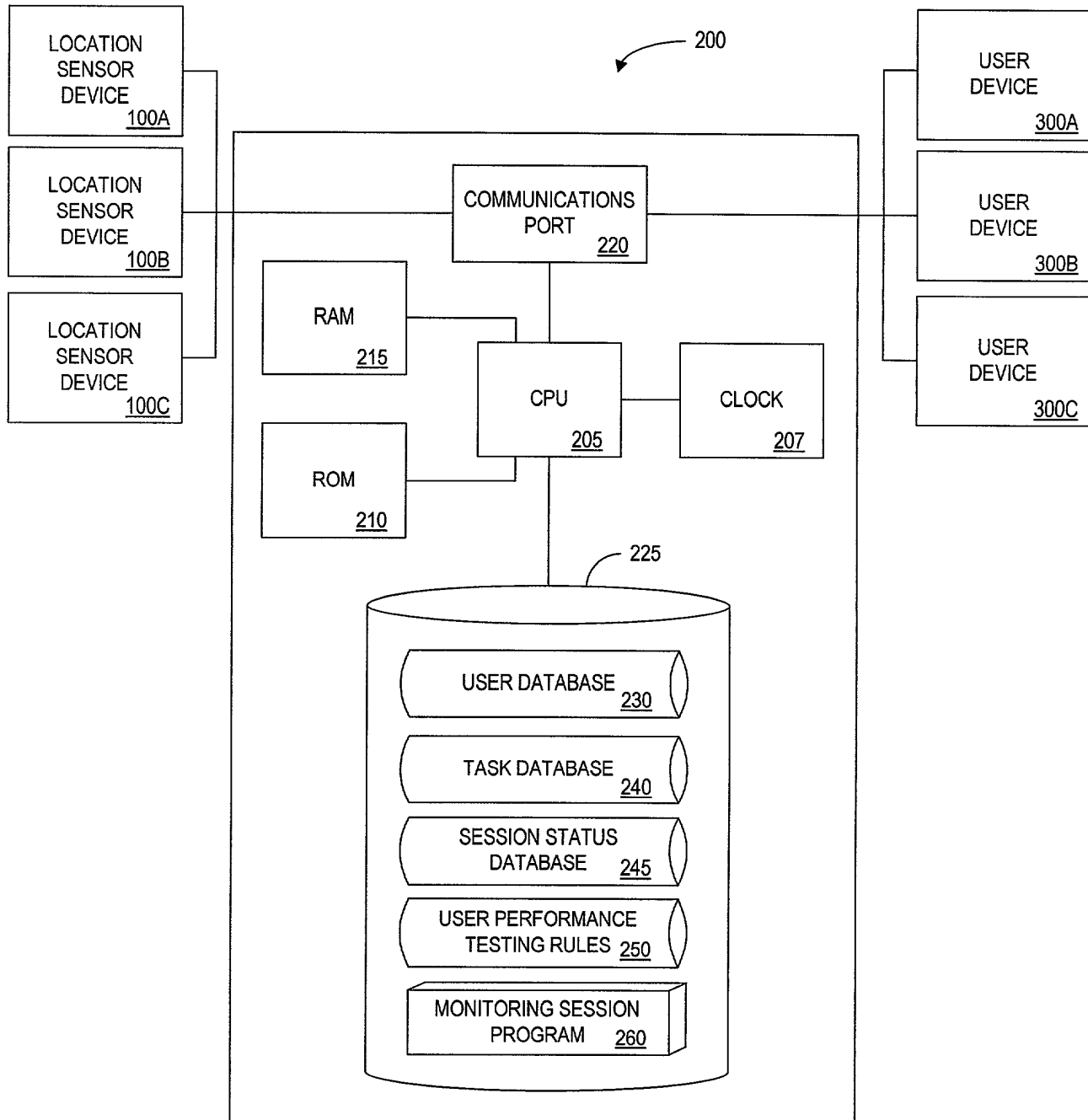


FIG. 2

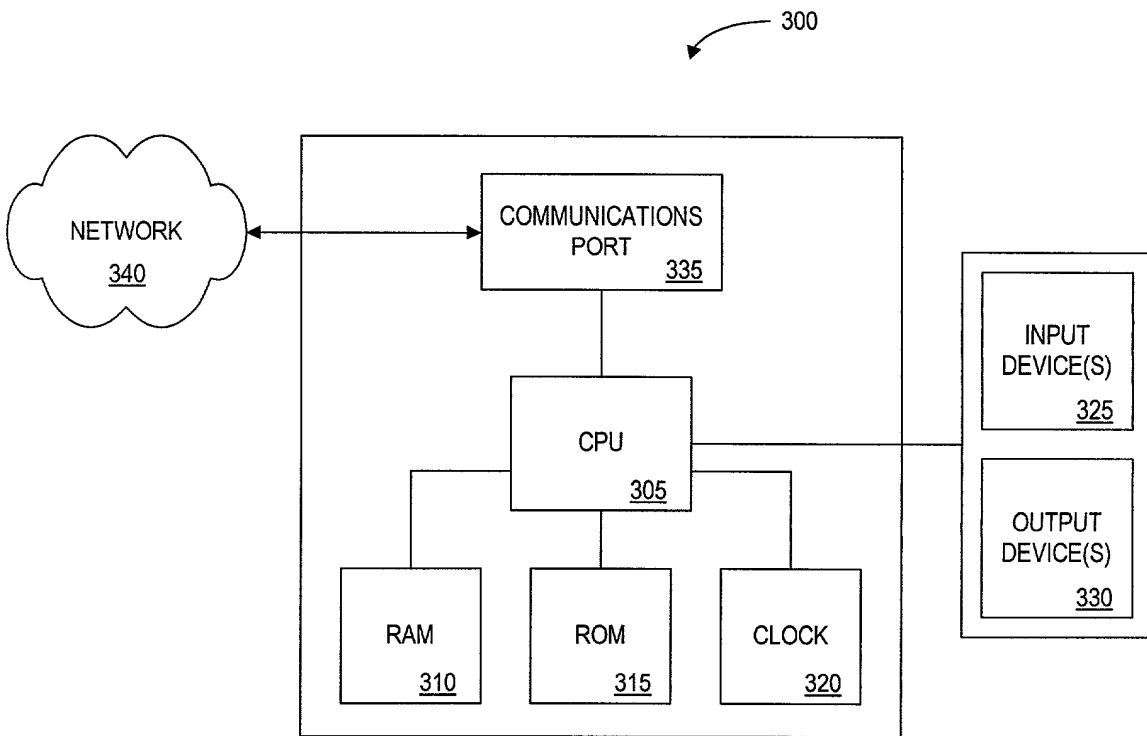


FIG. 3

230

USER IDENTIFIER 410	USER RATING 420	ACCOUNT BALANCE 430
BSMITH	0	- \$39.95
SJOHNSON	8	+ \$498.60
RMARTIN	7	+ \$192.55

FIG. 4

240

TASK IDENTIFIER	SENSOR LOCATIONS	SENSOR ADDRESS	LOCATION OWNER	PAY RATE	RULE(S)	SHIFT(S)	EMERGENCY PROCEDURES	FULLY ASSIGNED?
505	510	515	520	525	530	535	540	545
12345	FLEET BANK, HAMDEN, CT BRANCH	WWW.FLEET BANK.COM/ BRANCH3/CAM1	FLEET CORPORATION, HARTFORD, CT	\$5.00/ HOUR	3 USERS	11/98 12:00 AM - 3:00 AM	CLICK EMERGENCY BUTTON ON ISP FRAME	YES
					UP TO 2 USERS	11/98 3:01 AM - 6:00 AM		NO
12346	17 MAIN ST. ANYTOWN, CT 06999	(203) 555-1212	BOB OSBORNE	\$4.50/ HOUR	USER RATING > 6	11/98 9:00 AM - 5:00 PM	CALL ANYTOWN POLICE DEPT. AT (203) 981-3987	NO

FIG. 5

245

TASK IDENTIFIER 605	SHIFT 610	USER IDENTIFIER(S) 615	STATUS 620	PERFORMANCE RESULTS 625
12345	1/1/98 12:00 AM - 3:00 AM	RMARTIN SGAVIN DBYRD	COMPLETED	- ALL TEST COMMUNICATIONS POSITIVE - NO EMERGENCIES
12345	1/1/98 3:01 AM - 6:00 AM	SJOHNSON	IN PROGRESS	- FAILURE TO RESPOND TO TWO TEST COMMUNICATIONS
12346	1/2/98 9:00 AM - 5:00 PM	RMARTIN	N/A	N/A

FIG. 6

250

TASK IDENTIFIER 705	TEST COMMUNICATION 710	TEST COMMUNICATION INTERVALS 715	REQUIRED RESPONSE TIME 720	REQUIRED RESPONSE 725
12345	C://TESTCOM/12345/CLIP1 ("STAGED EMERGENCY")	RANDOM	10 SECONDS	CLICK 911 BUTTON
12346	C://TESTCOM/12346/ QUESTIONSET1 ("QUESTIONS")	EVERY 5 MINUTES	15 SECONDS	CORRECT ANSWER CHOICE

FIG. 7

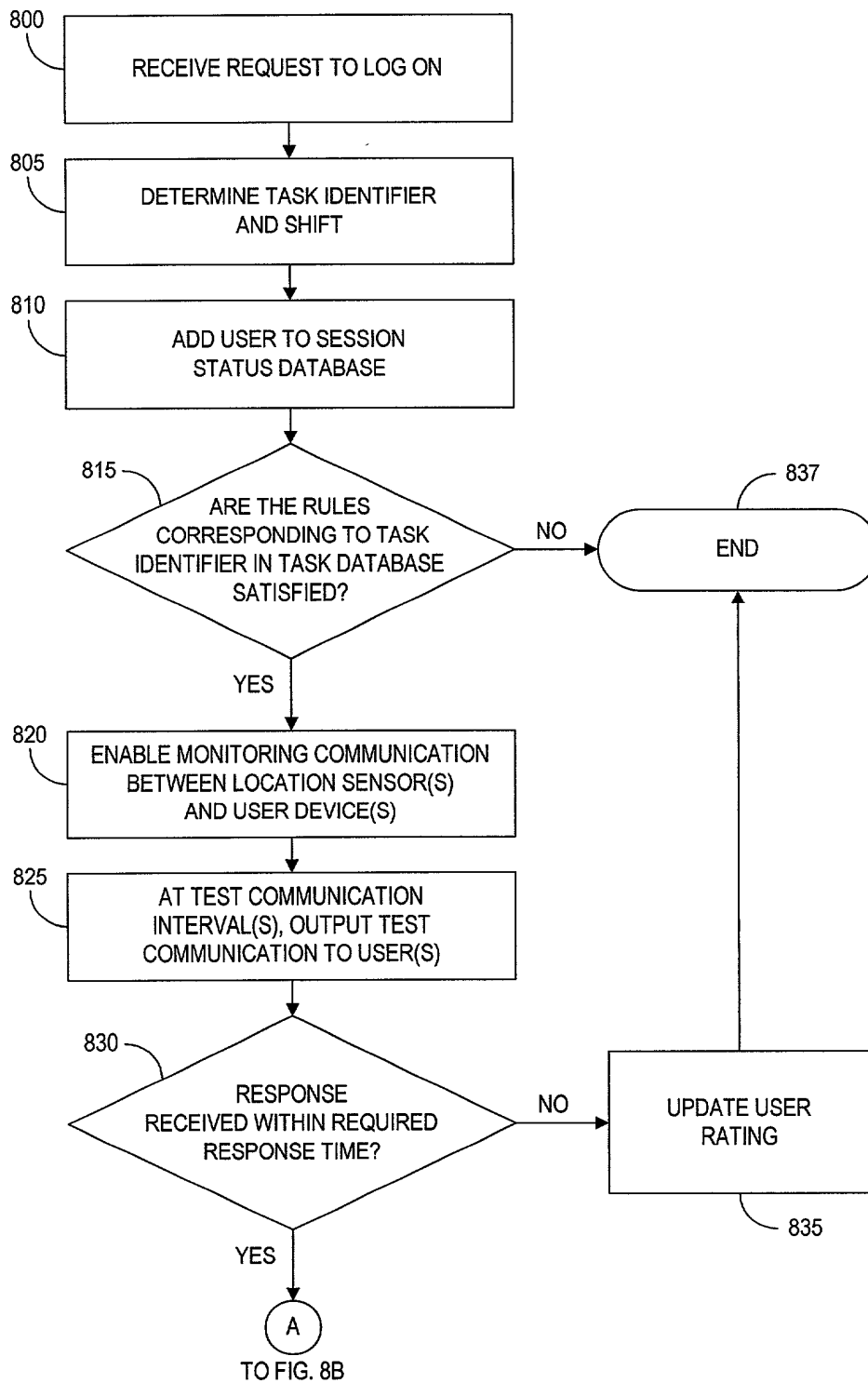


FIG. 8A

FROM FIG. 8A

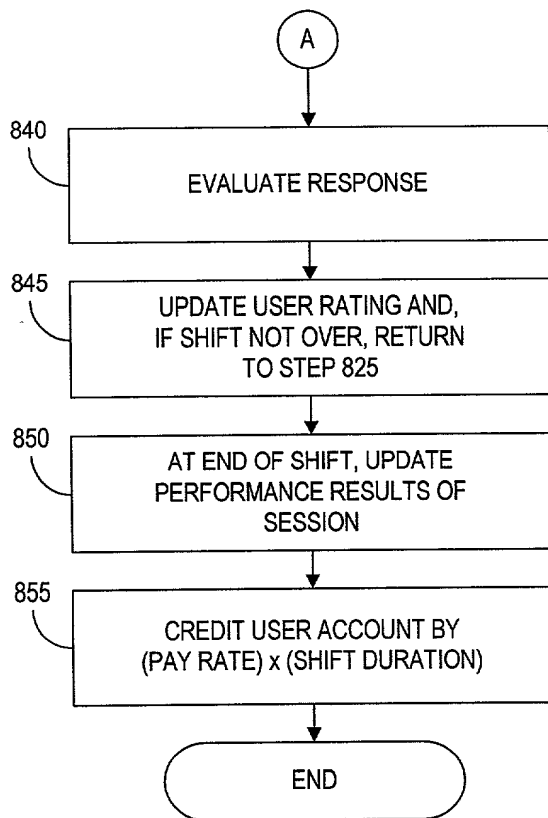


FIG. 8B

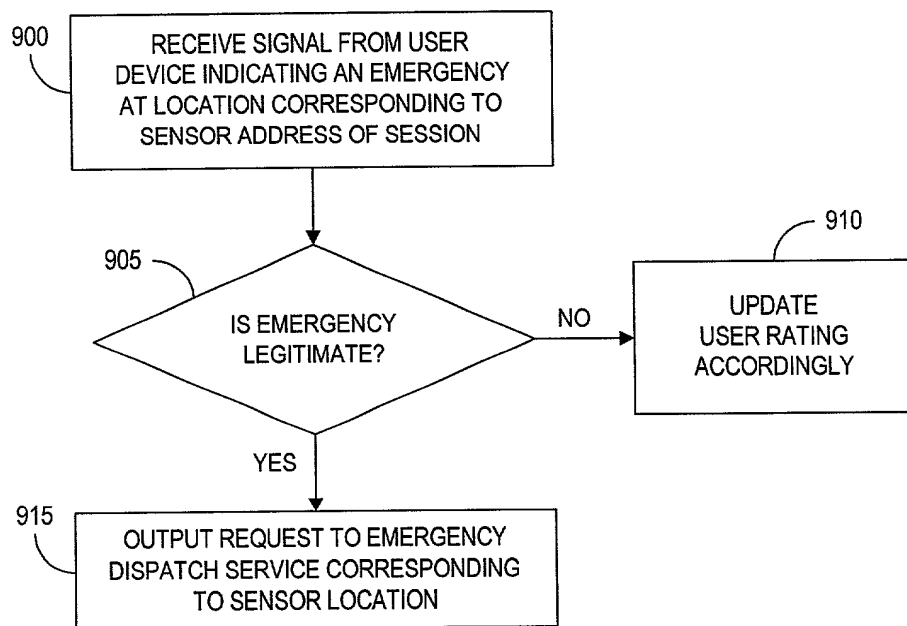


FIG. 9

Docket No.
WD2-98-057

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

INTERNET SURVEILLANCE SYSTEM AND METHOD

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International Application Number _____ and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.)

(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

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Fifth inventor's signature	Date
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Sixth inventor's signature	Date
Residence	
Citizenship	
Post Office Address	